

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

WALTER M. DICKIE, M.D., Director

Weekly Bulletin



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GUY P. JONES
EDITOR

Prophylaxis of Infantile Paralysis

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There are as yet no reliable measures available for the control of infantile paralysis. Serums, even those possessing high neutralizing power in the test tube, have not proved effective in the preventing of the experimental disease in monkeys. Moreover, the use of serum for preventive purposes is impractical, because of the difficulty of obtaining and processing sufficient serum for widespread use and also because of the transient character of whatever little protection it may convey. Vaccines also have not proved effective in protecting monkeys against intranasal inoculation with virus and are no longer available for human use.

A method of prevention which has proved effective in monkeys is the application of certain chemical agents to the olfactory mucosa. Among those which have been found most protective is 1 per cent zinc sulfate. A single application of this agent quite uniformly protects monkeys for periods of one month or more against repeated intranasal instillations of virus, sufficiently to infect all of an equal or greater number of controls. But while this method has proved highly effective in preventing the experimental disease, it can not be recommended as an altogether safe method for controlling the disease in man. It has been established by histological studies that the protection which is afforded monkeys by zinc sulfate rests on something more than a superficial change in the olfactory mucosa

and that it may inflict a deep seated damage to this structure.

Zinc sulfate has been used in two outbreaks of infantile paralysis, first in Toronto in 1937 and again in Nicaragua in 1938. The results of these two trials show that the use of 1 per cent zinc sulfate in man entails some risk of inducing a permanent loss of the sense of smell and that this risk is especially great in older children and in adults. In young children the sense of smell, which is also impaired by a thorough application of the solution, is generally regained within a week or two, but the risk of a permanent loss should be kept in mind for any age group.

It is assumed, on theoretical grounds, that in order for this prophylactic measure to be effective the chemical must cover all of the olfactory mucosa and to impair most or all of the olfactory endings. The criterion of complete coverage of the olfactory area is the induction of a complete loss of the sense of smell. But, while the objective is to effect only a superficial impairment, involving the olfactory endings only and thereby only a temporary loss of function, there is a risk that the drug action may extend into the depth of the mucosa and include also the cell bodies of the olfactory nerve (the olfactory cells), in which case a permanent loss of the sense of smell may well result.

For a further discussion of the practical aspects of chemoprophylaxis the reader is referred to two articles by Dr. E. W. Schultz (Eye, Ear, Nose and Throat Symposium, American Journal of Surgery, 43: 178 (October) 1938 and California and Western Medicine, 51, 16 (July) 1939).

REGULATIONS FOR USE OF SEWAGE FOR IRRIGATION

The disposal of sewage, sewage effluent or sludge for irrigation or fertilizing purposes requires the holding of a permit issued by the California State Board of Public Health. This applies to cities, towns, districts, firms or individuals owning or operating sewage systems.

Those who use sewage effluent or sludge are liable, as agents, for the violation of the provisions of such permit or of the public health laws. Sale or disposal of any crop dangerous to the public health is regulated by various state health laws.

The present season, because of a general lack of rainfall during the winter and spring, tends to increase the use of sewage for irrigation purposes. If the use of sewage is restricted to certain crops, the hazards to health may be negligible. In order to control health conditions related to the use of sewage for crop irrigation purposes, the California State Board of Health adopted the following regulations, which should receive the careful attention of all health officers:

RULE 1. Raw Sewage. Raw, i.e., untreated, sewage containing human excrement shall not be used for irrigating growing crops. Use of bar screens, grit, or detritus tanks is not to be considered as sewage treatment under these regulations.

RULE 2. Raw or Undigested Sludge. No sludge or screenings shall be distributed or used for fertilizing any growing vegetables, garden truck or low growing fruits or berries, unless the sludge or screenings shall have been rendered innocuous and free of danger of spreading disease by such measures as (a) kiln drying, (b) bed drying or aging in storage, and in either case for not less than 30 days (c) conditioning or treating to the satisfaction of the State Department of Public Health, (d) digestion to a point where the sludge or screenings is practically odorless, drains readily and not over 50 per cent of the total solid matter is in the volatile form.

RULE 3. Settled or Undisinfected Sewage Effluents. Effluents of septic tanks, Imhoff tanks or of other settling tanks, or partially disinfected effluents of sprinkling filters or activated sludge plants or similar sewages, shall not be used to water any growing vegetables, garden truck, berries, or low-growing fruits such that the fruit is in contact with the ground, or to water vineyards or orchard crops during seasons in which the windfalls or fruit lie on the ground. Such sewage, effluents or any sludge or screenings shall not be permitted in ditches or pipes which may be used to irrigate vegetables, garden truck, berries, or low-growing fruit.

Nursery stock, cotton, and such field crops as hay, grain, rice, alfalfa, fodder corn, cowbeets, and fodder carrots may be watered with such settled or undisinfected or partially disinfected sewage effluents provided that no milch cows are pastured on the land while it is moist with sewage, or have access to ditches carrying such sewage.

RULE 4. Oxidized Effluent Highly Disinfected or Otherwise Treated for Bacterial Removal. The foregoing restrictions do not apply against the use of well oxidized nonputrescible, and reliably disinfected or filtered effluents which always meet the following bacterial standard: in any 20 consecutive samples, from which five 10 c.c. portions each are examined, not over ten portions shall be positive for members of the Coli-aerogenes group, and in no single sample shall over half the .1 c.c. portions of the sample of the effluent be positive for the above organisms. Samples shall be analyzed according to the latest

Standard Methods of Examination of Water and Sewage of American Public Health Association.

The works and methods used for production of such oxidized and disinfected effluent must be correctly adapted to the purpose and designed with adequate factors of safety to produce uniformly, a well-oxidized, odorless and inoffensive effluent, thoroughly filtered, treated or disinfected to meet the above standard.

For example, where disinfection is employed apparatus and equipment for applying disinfecting agent or agents shall be in duplicate throughout, including machines, weighing scales and reserve supply of disinfectant for each machine. The disinfecting agent or agents shall be kept in separate rooms from the metering mechanism to prevent corrosion thereof. Each room shall be provided with a suitable source of heat so as to prevent interruptions of the disinfection in cold weather. Sewage flow shall be measured and flow of the disinfectant regulated to provide an adequate dose of disinfectant at all times. The feed of disinfectant shall provide an excess over actual needs and be divided between two or more metering machines so that interruption in the action of one will still yield the bacterial results prescribed. Appropriate laboratory tests to show that the disinfection is adequate shall be made at frequent intervals and at least twice daily. For such routine bacterial control negative 24-hour presumptive tests for the Coli-aerogenes group in the prescribed dilutions will be recognized as sufficient in the absence of other evidence that the presumptive test is insufficient. Proper records shall be kept of actual operations and results. In short, precautions shall be of an order fully equal to those taken by cities using reliable, modern methods of disinfecting water, obtained from a contaminated source of supply.

RULE 5. Cross Connections. No cross connections shall be permitted between any pipe line or works which may contain sewage, sewage effluent or sludge and any pipe line or works to be used for domestic water supply or drinking purposes. Signs warning that the water is not drinking water should be placed on pipes at ditches, faucets, etc., that may contain any sewage effluent, sewage or sludge.

WHY EXTRA SALT IS NEEDED IN SUMMER

Two million glands operate at full tilt in summer to keep the body temperature down to normal by a natural cooling system of perspiration and evaporation, Harriet Morgan Fyler, Ph.D., Chicago, declares in her explanation of the need for using extra salt during hot weather, published in the August issue of Hygeia.

"In the course of this cooling much water is lost," she continues. "With the water go some of the important elements of the blood. Unless special reinforcements are rushed in to take their place, the blood suffers a sort of starvation, hence fatigue and loss of appetite."

A little salt in a glass of drinking water is thus an effective means of combating this loss. Using extra salt on food where one likes it is also a good practice. Many factories provide salt dispensers near the drinking fountains for their employees.

Drivers between the ages of 16 and 20 kill on the average twice as many persons in highway accidents as is averaged by all motorists, according to statistics in the August issue of Hygeia.

Be sober and temperate and you will be healthy.—Franklin.

NOW IS THE TIME TO PREVENT SEASONAL FOOD POISONING

The warm summer season is the time when most cases of food poisoning, due to contaminated custard products, occur in California. It is of great importance to the public health that all custard products at this season of the year be handled in a manner that will prevent their contamination.

In order to control the production of such products commercially and to protect the public health the California State Board of Public Health adopted the following regulations, which are now in force:

REGULATION—CUSTARD FILLINGS FOR PASTRY

WHEREAS, Poisoning with the toxins of staphylococci and colon group present in foods is becoming more common, the protection of the public health requires that products subject to such contamination be prepared with due regard to the prevention of such accident; therefore, be it resolved that:

1. All commercially prepared custards or cream fillings of pastries shall be made under conditions of cleanliness involving all stages of its manufacture.
2. Only efficiently pasteurized milk may be used.
3. The temperature and time of heating the mix shall be as a minimum, the equivalent of a temperature of 140 degrees Fahrenheit for a period of one hour, provided, however, that other temperatures and times may be used when specifically approved by the Director of Public Health.
4. Upon completion of the cooking of the custard when used for filling of eclairs or cream puffs, or closed shell, that same should be put into shallow sterilized containers and chilled without delay to 50 degrees Fahrenheit. When custard fillings are used in open shells that the pie and the shell must be cooled likewise to 50 degrees Fahrenheit.
5. Custards must be kept in the cooling room until used in making pastries.
6. The filling apparatus which shall be wholly of metal or rubber, cleaned with boiling water and sterilized brushes, or with a jet of live steam under pressure.
7. Before use, filling apparatus shall be sterilized by either boiling for ten minutes, or steaming in a steam sterilizer for one hour.
8. The manufacturer of custard-filled pastry shall prohibit any person suffering from a skin infection from preparing or handling in any manner such pastry or the custard mix used therein.
9. Only freshly made cream filling shall be used in each batch.
10. During the process of distribution, all pastries containing cream fillers shall be maintained at a temperature that will not produce spoilage. (For its information value, it may be stated that scientific investigation has shown 50 degrees Fahrenheit to be the maximum temperature.)

Adopted April 10, 1936.

California State Board of Public Health.

By study man produced the stone tool, the bow and arrow, the numerals, and the alphabet. Likewise tillage, books, and all else by which he lifted himself out of savagery. Among his great works—poems, commerce, and government—each is a creation of the mind. The structures in which man resides, works, and escapes the pelting elements, the conveyances in which he travels, are but mental reflections that have taken tangible form.

DISEASES REPORTABLE IN CALIFORNIA

REPORTABLE ONLY

Anthrax	Malaria*
Beriberi	Pellagra
Botulism	Pneumonia (Lobar)
Chancroid	Relapsing Fever
Coccidioidal Granuloma	Rocky Mountain Spotted Fever
Dengue*	Septic Sore Throat
Fluke Infection	Tetanus
Food Poisoning	Trichinosis
Glanders†	Tularemia
Hookworm	Undulant Fever
Jaundice (Infectious)	
Lymphogranuloma Inguinale	

ISOLATION OF PATIENT

Chickenpox	Ophthalmia Neonatorum
Dysentery (Amoebic)	Psittacosis
Dysentery (Bacillary)	Rabies (Animal)
Erysipelas	Rabies (Human)
German Measles	Syphilis
Gonococcus Infection	Trachoma
Influenza	Tuberculosis
Measles	Whooping Cough
Mumps	

QUARANTINABLE

Cholera†	Scarlet Fever
Diphtheria	Smallpox
Encephalitis (Epidemic)	Typhoid and Paratyphoid Fever
Leprosy	Typhus Fever
Meningitis (Epidemic)	Yellow Fever†
Plague†	
Acute Anterior Poliomyelitis	

* Patients should be kept in mosquito-free room.

† Cases to be reported to State Department of Public Health by telephone or telegraph and special instructions will be issued.

"May I suggest, with respect to health education, that until we can establish some of our teaching on a more sound scientific foundation, we give a little less emphasis to personal hygiene habits—especially in our schools, teach the individual the importance of personal immunization, early medical care and diagnosis in illness, and impress upon him the value of community-wide environmental sanitation measures. We also need another kind of health education—what I call 'political' education—acquainting the public with what the health department can do, what its objectives are and what its achievements have been. This aspect of our health education program has been sadly neglected in many sections of the country in the past. There is urgent need for teaching these things—interpreting health needs and the health program to the 'man on the street,' and the woman in the home."—Dr. C. E. Waller, U. S. P. H. S.

MORBIDITY**Complete Reports for Following Diseases for Week Ending July 22, 1939****Chickenpox**

132 cases: Alameda 2, Albany 1, Hayward 1, Oakland 14, El Dorado County 1, Bishop 2, Bakersfield 2, Kings County 2, Hanford 1, Los Angeles County 7, Long Beach 5, Los Angeles 10, Manhattan 1, Pasadena 3, Pomona 1, San Marino 1, Whittier 1, South Gate 1, Signal Hill 2, San Anselmo 1, Mariposa County 4, Pacific Grove 2, Napa 5, Orange County 1, Corona 1, Riverside 2, Sacramento 5, San Diego County 2, National City 3, San Diego 12, San Francisco 7, San Joaquin County 1, Stockton 1, San Luis Obispo County 1, San Mateo County 3, Santa Barbara 1, Santa Clara County 6, San Jose 5, Sonoma County 3, Santa Rosa 1, Stanislaus County 3, Visalia 4.

Diphtheria

24 cases: Berkeley 1, Bakersfield 1, Kings County 1, Los Angeles 5, Riverside County 1, San Bernardino 1, San Diego County 2, San Diego 7, San Francisco 1, Redwood City 1, Sonoma County 2, Santa Paula 1.

German Measles

7 cases: Kingsburg 1, Los Angeles 1, San Diego County 2, La Mesa 1, San Diego 1, San Francisco 1.

Influenza

8 cases: Los Angeles County 1, Glendale 1, Los Angeles 4, Santa Monica 1, Lynwood 1.

Malaria

13 cases: Livermore 1, Sacramento County 1, San Joaquin County 2, San Luis Obispo County 1, Santa Barbara 1, Winters 4, Yuba County 3.

Measles

370 cases: Albany 2, Berkeley 5, Oakland 1, Chico 1, Calaveras County 1, Colusa County 1, Pittsburg 1, El Dorado County 1, Placerville 1, Fresno County 11, Fresno 2, Eureka 3, Kings County 4, Los Angeles County 37, Alhambra 5, Azusa 1, Claremont 2, El Monte 1, Huntington Park 1, Long Beach 5, Los Angeles 67, Manhattan 3, Montebello 2, Pasadena 19, Pomona 2, San Gabriel 2, Santa Monica 8, Torrance 1, South Gate 3, Monterey Park 1, Bell 1, Ross 38, Merced County 1, Merced 3, Monterey County 9, Carmel 2, Monterey 2, Anaheim 2, Newport Beach 2, Orange 3, Riverside County 1, Corona 4, Elsinore 6, Riverside 1, Sacramento 3, San Bernardino 2, San Diego County 7, Chula Vista 9, El Cajon 1, La Mesa 3, San Diego 31, San Francisco 3, San Joaquin County 3, Lodi 1, Stockton 7, Tracy 3, San Luis Obispo County 2, San Luis Obispo 1, Menlo Park 1, Santa Barbara County 3, Santa Barbara 12, Palo Alto 2, San Jose 3, Sonoma County 1, Santa Rosa 1, Fillmore 1, Ventura 1.

Mumps

171 cases: Albany 2, Berkeley 7, Hayward 1, Oakland 4, Butte County 1, Fresno County 2, Kern County 1, Bakersfield 3, Los Angeles County 15, Avalon 2, Glendora 1, Long Beach 2, Los Angeles 8, Santa Monica 1, Maywood 1, Bell 1, Marin County 4, Ross 17, San Anselmo 15, San Rafael 1, Sausalito 1, Monterey County 1, Salinas 1, Napa 1, La Habra 1, Riverside County 1, Beaumont 1, Riverside 1, Sacramento 13, San Diego 2, San Francisco 22, San Joaquin County 3, Stockton 4, Tracy 4, San Luis Obispo 3, San Mateo County 1, Burlingame 1, San Mateo 3, Lompoc 2, Santa Barbara 2, Santa Clara County 1, Palo Alto 3, Shasta County 7, Siskiyou County 1, Trinity County 1, Ventura 1.

Pneumonia (Lobar)

26 cases: Calaveras County 1, Los Angeles County 5, Glendale 1, Los Angeles 16, Monterey County 1, Fullerton 1, San Francisco 1.

Scarlet Fever

73 cases: San Leandro 1, Kingsburg 2, Callexico 1, El Centro 2, Kern County 1, Kings County 1, Los Angeles County 4, Burbank 1, Glendale 1, Huntington Park 2, Long Beach 2, Los Angeles 17, Pasadena 6, Pomona 2, Redondo 1, Santa Monica 1, Ross 1, Merced 2, Orange County 1, Sacramento 1, San Diego County 2, San Diego 2, San Francisco 3, San Joaquin County 1, Stockton 5, Santa Barbara 2, Santa Clara County 1, San Jose 1, Siskiyou County 4, Solano County 1, Yuba County 1.

Smallpox

3 cases: Riverside.

Typhoid Fever

9 cases: Butte County 1, Kern County 1, Huntington Park 1, Los Angeles 1, Riverside County 2, Blythe 1, San Francisco 1, Stanislaus County 1.

Whooping Cough

134 cases: Alameda County 4, Alameda 2, Albany 1, Berkeley 3, Livermore 1, Oakland 2, Kern County 10, Bakersfield 1, Los Angeles County 19, Culver City 1, Long Beach 7, Los Angeles 21, Pasadena 3, Redondo 1, Lynwood 1, South Gate 2, Monterey Park 1, Ross 1, San Rafael 1, Orange County 2, Fullerton 6, Santa Ana 2, Tustin 2, Plumas County 1, Sacramento 2, San

Bernardino 1, San Diego 15, San Francisco 7, Manteca 2, Stockton 2, Palo Alto 2, Santa Cruz 4, Sutter County 4.

Meningitis (Epidemic)

One case: Los Angeles.

Dysentery (Amoebic)

2 cases: Los Angeles County 1, Los Angeles 1.

Dysentery (Bacillary)

10 cases: Los Angeles County 1, El Monte 1, Los Angeles 3, San Gabriel 1, Lynwood 1, Laguna Beach 1, San Diego County 1, Sonoma County 1.

Pellagra

One case: Callexico.

Poliomyelitis

52 cases: Kern County 9, Bakersfield 2, Kings County 4, Los Angeles County 2, Alhambra 1, Avalon 1, Glendale 2, Huntington Park 2, Los Angeles 6, Pasadena 2, San Fernando 1, South Gate 1, Sausalito 1, Soledad 1, Orange 1, Indio 1, National City 1, San Diego 2, Santa Barbara 1, Santa Clara County 1, San Jose 1, Sunnyvale 1, Sonoma County 1, Stanislaus County 5, Tulare County 1, California 1.*

Tetanus

One case: Los Angeles.

Trachoma

27 cases: Fresno County 8, Humboldt County 1, Los Angeles 1, Pasadena 1, Mendocino County 7, Orange County 2, Santa Ana 2, Placer County 1, San Joaquin County 1, Porterville 3.

Encephalitis (Epidemic)

One case: Stockton.

Paratyphoid Fever

2 cases: Oakland 1, Sacramento County 1.

Trichinosis

2 cases: Contra Costa County 1, Monterey 1.

Jaundice (Epidemic)

One case: Sonoma County.

Food Poisoning

38 cases: Los Angeles County 8, Madera 20, Monterey County 4, San Francisco 3, San Joaquin County 3.

Undulant Fever

10 cases: Brawley 1, Pomona 3, Orange County 2, Santa Ana 1, Riverside County 1, Lodi 1, Shasta County 1.

Tularemia

2 cases: Sonoma County 1, California 1.*

Coccidioides Granuloma

One case: Bakersfield.

Septic Sore Throat

One case: Bakersfield.

Relapsing Fever

One Case: El Dorado County.

Psittacosis

One case: San Francisco.

Rabies (Animal)

7 cases: Sanger 1, Los Angeles County 2, Los Angeles 2, San Mateo County 1, Santa Rosa 1.

* Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubation period of the disease. These cases are not chargeable to any one locality.

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